IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A sending radio station to arrange symbols to be sent in the frequency axis and send signals to a radio terminal inside the area using one or a plurality of carrier frequency bands, in a radio communication system with a hierarchical cell structure, wherein the sending radio station comprises:

a signal detection means for detecting at least one carrier frequency band signal ~~being~~ pertaining to a transmission system other than that of its own station;

a symbol synchronization detection means for detecting sending-symbol synchronization based on at least one received signal on detecting the carrier frequency band signal pertaining to the transmission system other than that of its own station; and

a signal sending means for sending the signal to be sent, based on the symbol sending timing derived based on the detected symbol synchronization.

Claim 2 (Original): The sending radio station according to claim 1 furthermore comprising a frequency interval detection means for detecting the frequency interval based on the received signal from a radio terminal, and a frequency set up means for setting up the sending carrier frequency, based on the detected frequency interval, so as to acquire an orthogonal relationship with respect to the sending carrier frequency of the radio terminal.

Claim 3 (Original): The sending radio station according to claim 1, furthermore comprising a reception quality measurement means to measure reception quality based on the received signal from the radio terminal, and a spread coefficient set up means to set up a spread coefficient based on the reception quality obtained by the measurement.

Claim 4 (Original): A receiving radio station to receive signals from a sending radio station for arranging symbols to be sent in the frequency axis and sending signals to a radio terminal inside the area using one or a plurality of carrier frequency bands, and to locate in a radio communication system with a hierarchical cell structure,

wherein the receiving radio station has a simultaneous reception control means for simultaneously receiving signals of a plurality of carrier frequency bands and demodulating the signals.

Claim 5 (Original): The receiving radio station according to claim 4, furthermore comprising a registration means, wherein when the station of its own moves into a small scale cell in the hierarchical cell structure, the registration means will register an information to a data transfer system in the radio communication system, the information indicating that the station of its own is ready for receiving signal from the sending radio station of a large scale cell controlling the area, and ready for receiving signal from the sending radio station of the small scale cell.

Claim 6 (Original): The receiving radio station according to claim 4, wherein the simultaneous reception control means selects signals of at least one carrier frequency band pertaining to another transmission system, and demodulates the signals.

Claim 7 (Currently Amended): A radio communication system with a hierarchical cell structure, comprised of a sending radio station to arrange symbols to be sent in the frequency axis and send signals to a radio terminal inside the area using one or a plurality of carrier frequency bands, and a receiving radio station which receives the signals from the sending radio station, wherein the sending radio station comprises:

a signal detection means for detecting at least one carrier frequency band signal ~~being~~ pertaining to a transmission system other than that of its own station;

a symbol synchronization detection means for detecting sending-symbol synchronization based on at least one received signal on detecting the carrier frequency band signal pertaining to the transmission system other than that of its own station;

a signal sending means for sending the signal to be sent, at the symbol sending timing derived based on the detected symbol synchronization;

and the receiving radio station comprises a simultaneous reception control means for simultaneously receiving the signals of a plurality of carrier frequency bands and demodulating the signals.

Claim 8 (Original): The radio communication system according to claim 7 comprised of a plurality of sending radio stations using a plurality of different carrier frequency bands,

wherein the plurality of sending radio stations link each other over a cable or radio, and each sending radio station synchronously sends symbols of the signals to be sent.

Claim 9 (Original): The radio communication systems according to claim 8, wherein the plurality of sending radio stations link each other to set up such that the sending carrier frequency of the signal to be sent by each sending radio station becomes orthogonal to each other.

Claim 10 (Original): A radio communication system with a hierarchical cell structure, comprised of a sending radio station to arrange the symbol to be sent in the frequency axis and send signals to a radio terminal inside the area using one or a plurality of

carrier frequency bands, and a receiving radio station which receives the signals from the sending radio station;

wherein the receiving radio station comprises:

a synchronization request means for requesting symbol synchronization to the sending radio station, and

a simultaneous reception control means for simultaneously receiving the signals of a plurality of carrier frequency bands and demodulating the signals,

and the sending radio station comprises:

a symbol synchronization detection means for detecting the sending symbol synchronization based on at least one received signal when a request of the symbol synchronization is received from the receiving radio station, and

a signal sending means for sending the signal to be sent, at the symbol sending timing derived based on the detected symbol synchronization.

Claim 11 (Original): A radio communication method applicable in a sending radio station to arrange symbols to be sent in the frequency axis and send signals to the radio terminal inside the area using one or a plurality of carrier frequency bands, in the radio communication system with a hierarchical cell structure,

wherein the radio communication method comprises:

a signal detection step wherein the sending radio station detects at least one carrier frequency band signal of a transmission system other than that of its own station;

a symbol synchronization detection step wherein the sending radio station detects the sending symbol synchronization based on at least one received signal, on detecting the carrier frequency band signal pertaining to the transmission system other than that of its own station;

a signal sending step wherein the sending radio station sends signals to be sent, at the symbol sending timing derived based on the detected symbol synchronization.

Claim 12 (Original): A radio communication method in a radio communication system with a hierarchical cell structure comprised of a sending radio station to arrange symbols to be sent in the frequency axis and send signals to a radio terminal inside the area using one or a plurality of carrier frequency bands, and a receiving radio station to receive signals from the sending radio station, wherein the radio communication method comprises:

a synchronization request step wherein the receiving radio station requests the symbol synchronization to the sending radio station;

a symbol synchronization detection step wherein the sending radio station detects the sending symbol synchronization based on at least one received signal, when the sending radio station receives a request of the symbol synchronization from the receiving radio station; and

a signal sending step wherein the sending radio station sends signals to be sent, at the symbol sending timing derived based on the detected symbol synchronization.